

SEQUENCE LISTING

<110> Bernard, Dominique
Mehul, Villejuif
L'OREAL L'OREAL

<120> USE OF ASPARTIC PROTEASES IN COSMETICS AND THERAPEUTICS

<130> 032487-010

<140> 10/520,521

<141> 2005-01-07

<150> PCT/FR03/002151

<151> 2003-07-09

<150> FR 02 08613 <151> 2002-07-09

<160> 39

<170> PatentIn version 3.1

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Arg Gln His Ala Phe Val Pro Glu Pro Phe Asp Gly Ala Asn Val Val
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Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys
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Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His
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35 40 45

Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys Ile Leu
50 55 60

Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys Leu Lys Ala
65 70 75 80

Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile Gly Thr
85 90 95

Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His Arg Thr
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Phe Val Pro Glu Pro Phe Asp Gly Ala Asn Val Val Pro Asn Leu Trp
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96

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Leu His Ser Phe Glu Val Ile Asn Asp Leu Asn His Trp Asp His Ile
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144

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192

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240

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288

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432

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480

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528

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Thr Ala Pro Ala Pro Ser Cys Leu Pro Lys Ala Gly Gln Val Ile Pro	
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Leu Cys Gly Phe Leu Phe Leu Ala Trp Val Ala Ala Glu Val Pro Glu	
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gag agc agc agg atg gcc ggg agc gga gcc agg agt gag gaa ggc cgc	288
Glu Ser Ser Arg Met Ala Gly Ser Gly Ala Arg Ser Glu Glu Gly Arg	
	85 90 95
cgg cag cat gcc ttc gtc ccg gaa cct ttt gat ggg gcc aat gtc gtc	336

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Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln Val Ser Val Val
20 25 30

cac cca aac ttg tgg gag gag gtc act gat ggc gat ctg gac acc ctg      144
His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr Leu
35 40 45

cag ccc ttt gag aat gtg gta aag gtg gcc aat ggt gct gaa atg aag      192
Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys
50 55 60

atc ctg ggt gtc tgg gat aca gcg gtg tcc cta ggc aag ctg aag ctg      240
Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys Leu
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aag gca cag ttc cta gtg gcc aat gcg agt gcc gag gaa gcc atc att      288
Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile
85 90 95

ggc act gat gtg ctc cag gac cac aat gct atc ctg gac ttt gag cac      336
Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His
100 105 110

cgc aca tgc acc ctg aaa ggg aag aag ttt cgc ctt ctg cct gtg gga      384
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 His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val
 130 135 140
 gga ggg tcc ctg gaa gat gag ttt gac ctg gag ctc ata gag gag gac 480
 Gly Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu Ile Glu Glu Asp
 Page 13

145 150 155 160

ccc tcc tca gaa gaa ggg cgg cag gag cta tcc cac
Pro Ser Ser Glu Glu Gly Arg Gln Glu Leu Ser His
165 170

516

<210> 27
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Leu Leu Lys Ala Phe Gly Val Pro Gly Ala Ala Pro Ser His Leu Pro
1 5 10 15
Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly
20 25 30
Lys Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln Val Ser Val
35 40 45
Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr
50 55 60
Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met
65 70 75 80
Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys
85 90 95
Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile
100 105 110
Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu
115 120 125
His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val
130 135 140
Gly Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu
145 150 155

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1 5 10 15
aaa gag atc gtc atg ggt aag ggc tac tat ctc aag ggg aag att ggc
Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly
20 25 30

48

96

aaa gtg ccc gtg agg ttc ctg gtg gac tct ggg gcc cag gtc tct gtg Lys Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln Val Ser Val 35 40 45	144
gtc cac cca aac ttg tgg gag gag gtc act gat ggc gat ctg gac acc Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr 50 55 60	192
ctg cag ccc ttt gag aat gtg gta aag gtg gcc aat ggt gct gaa atg Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met 65 70 75 80	240
aag atc ctg ggt gtc tgg gat aca gcg gtg tcc cta ggc aag ctg aag Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys 85 90 95	288
ctg aag gca cag ttc cta gtg gcc aat gcg agt gcc gag gaa gcc atc Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile 100 105 110	336
att ggc act gat gtg ctc cag gac cac aat gct atc ctg gac ttt gag Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu 115 120 125	384
cac cgc aca tgc acc ctg aaa ggg aag aag ttt cgc ctt ctg cct gtg His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val 130 135 140	432
gga ggg tcc ctg gaa gat gag ttt gac ctg gag Gly Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu 145 150 155	465

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<400> 29
Phe Ala Asn Ser
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Asp Leu Glu Leu Ile Glu
1 5

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Glu Phe Asp Leu Glu Leu Ile Glu Glu Asp
1 5 10

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1 5 10

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Glu Pro Asn Leu Asp Leu Ile Glu Glu Asp
1 5 10

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20 25 30
Leu His Ser Phe Glu Val Ile Asn Asp Leu Asn His Trp Asp His Ile
35 40 45
Thr Lys Leu Arg Phe Leu Lys Glu Ser Leu Arg Gly Glu Ala Leu Gly
50 55 60
Val Tyr Asn Arg Leu Ser Pro Gln Asp Gln Gly Asp Tyr Gly Thr Val
65 70 75 80
Lys Glu Ala Leu Leu Lys Ala Phe Gly Val Pro Gly Ala Ala Pro Ser
85 90 95
His Leu Pro Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly
100 105 110

Lys Ile Gly Lys Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln
115 120 125
Val Ser Val Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp
130 135 140
Leu Asp Thr Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly
145 150 155 160
Ala Glu Met Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly
165 170 175
Lys Leu Lys Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu
180 185 190
Glu Ala Ile Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu
195 200 205
Asp Phe Glu His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu
210 215 220
Leu Pro Val Gly Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu Leu Ile
225 230 235 240
Glu Glu Asp Pro Ser Ser Glu Glu Gly Arg Gln Glu Leu Ser His
245 250 255

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20 25 30
Leu Leu Asp Thr Gly Ala Asp Ile Thr Ile Leu Asn Arg Arg Asp Phe
35 40 45
Gln Val Lys Asn Ser Ile Glu Asn Gly Arg Gln Asn Me tIle Gly Val
50 55 60
Gly Gly Gly Lys Arg Gly Thr Asn Tyr Ile Asn Val His Leu Glu Ile
65 70 75 80
Arg Asp Glu Asn Tyr Lys Thr Gln Cys Ile Phe Gly Asn Val Cys Val
85 90 95
Leu Glu Asp Asn Ser Leu Ile Gln Pro Leu Leu Gly Arg Asp Asn Met
100 105 110
Ile Lys Phe Asn Ile Arg Leu Val Met Ala Gln
115 120

<210> 38
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Pro Gln Phe Ser Leu Trp Lys Arg Pro Val Val Thr Ala Tyr Ile Glu
1 5 10 15
Gly Gln Pro Val Glu Val Leu Leu Asp Thr Gly Ala Asp Asp Ser Ile
20 25 30
Val Ala Gly Ile Glu Leu Gly Asn Asn Tyr Ser Pro Lys Ile Val Gly
35 40 45
Gly Ile Gly Gly Phe Ile Asn Thr Lys Glu Tyr Lys Asn Val Glu Ile
50 55 60
Glu Val Leu Asn Lys Lys Val Arg Ala Thr Ile Met Thr Gly Asp Thr
65 70 75 80
Pro Ile Asn Ile Phe Gly Arg Asn Ile Leu Thr Ala Leu Gly Met Ser
85 90 95
Leu Asn Leu

<210> 39

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<213> Homo Sapiens

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Ala Asn Ser Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly Lys
1 5 10 15
Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln Val Ser Val Val
20 25 30
His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr Leu
35 40 45
Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys
50 55 60
Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys Leu
65 70 75 80
Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile
85 90 95
Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His
100 105 110
Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val Gly
115 120 125
Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu
130 135